2 Eagle Vegetation Management Project

Economic Report

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Introduction

This report analyzes the economic effects associated with the Two Eagle Vegetation Management Project (hereafter called **Two Eagle Project**). The effects of the alternatives on the local economy are discussed in terms of investments to individual projects for contracted work in terms of jobs in the forest, wages associated with jobs, and the total economic output to local economies.

The economic impact analysis is used to identify potential impacts to economic conditions such as employment and income.

Affected Environment

Affected Geographic Area

The 2 Eagle Project is located within Baker County. The counties most likely affected by the Two Eagle Project are the five county region of northeast Oregon including Baker, Grant, Umatilla, Union, and Wallowa counties. For this five county region, an estimated 49.1% of the land base is federal land, of which 43.1% is Forest Service ownerships. See table 1 below for ownership patterns for each individual county.

Table 1 – Land Ownership by County

County	Federal Land Ownership	Forest Service Land Ownership
Baker County	1,011,648 acres (51.2%)	647,812 acres (32.8%)
Union County	623,591 acres (47.8%)	616,213acres (47.2%)
Grant County	1,763,748 acres (60.8%)	1,590,516 acres (54.9%)
Umatilla County	449,003 acres (21.7%)	405,523 acres (19.6%)
Wallowa County	1,187,755 acres (58.9%)	1,163,928 acres (57.7%)

*Estimates from Headwaters Economics, Economic Profile System (2016 basis)

Employment Trends

In 1998, timber represented 7.9% of total employment in the local five county region Baker, Union, Wallowa, Umatilla and Grant). In 2013, timber representation had been reduced to 3.9% of the total employment. See table 2 below for a summary of estimated timber jobs and total workforce these jobs represent for each county.

Table 2 – 2013 Timber Job Totals by County

County	Timber Forestry, Logging and Support	Timber Manufacturing Facilities
Baker County	12 jobs (0.3%)	174 jobs (4.2%)
Union County	74 jobs (1.0 %)	427 jobs (6.1%)
Grant County	43 jobs (3.0 %)	156 jobs (10.9%)
Umatilla County	23 jobs (0.1%)	321 jobs (1.5%)
Wallowa County	55 jobs (4.7%)	33 jobs (1.8%)

*Estimates from Headwaters Economics, Economic Profile System (2016 basis)

Economic Effects

Introduction

The boundary of the direct, indirect and cumulative effects analysis area incudes the five counties surrounding the Two Eagle project area boundary (Baker, Grant, Umatilla, Union, Wallowa counties). This five county area provides a potential workforce to implement the project as well as existing infrastructure and delivery points involved with wood product manufacturing.

Assumptions

The following describes the assumptions utilized for analyzing the effects of implementing the alternatives based upon estimated contract investments needed to implement planned activities of the project.

Numerous contracts will be offered to accomplish the planned ground activities identified in each alternative. It is anticipated that service contract types will be extensively utilized since the value of products will be insufficient to offset the cost of the work in all alternatives. Contracts may include a variety of work such as timber harvest activities (including costs associated with stump to truck, haul, road maintenance, reconstruction and temporary road costs), forest road improvements (fish passage culvert), and fuels reduction treatments. The potential investments have been incorporated into an economic model that provides a relative comparison between alternatives in terms of potential economic effects to local communities. This analysis focuses on the potential investments to implement the ground activities associated with the project and compares modeled effects on employment, wages and economic impacts within communities.

Table 3 displays costing assumptions utilized to calculate potential investments. Investment contract costs were estimated based on removal volumes for harvest type work, treatment acres of fuels/vegetation management work and treatment miles for road reconstruction work.

Table 3 – Contract Investment Assumptions and Alternative Comparison

Type of Work	Investment Value	Acres by Alternative			
		Alternative 1	Alternative 2	Alt. 2 Modified	Alternative 3
Ground Based Logging	$150/MBF	0	4,296 MBF	4,296 MBF	3860 MBF
Skyline Logging	$300/MBF	0	1,572 MBF	1,572 MBF	811 MBF
Road Reconstruction	$25,000/mile	0	1.7	1.7	1.7
Road Maintenance	$500/ mile	0	15.85	15.85	5.01
Road Decommissioning	$2434/ mile	0	9.86	9.86	9.86
Culvert Replacement Fish Passage	$100,000	0	3	3	3
Temporary Culverts	$5,000	0	4	4	3
Soil Improvement	$4,000	NO	YES	YES	YES
Campsite Improvement	15,000	NO	YES	YES	YES
User Created Rd closure	$5000/ Mile	0	.5	.5	.5
Gate Installation	$2,500/Gate	0	3	3	3
Meadow Restoration	$200/ ac	0	0	27	0
PCT – Precommercial thin	$225ac	0	384 ac	291 ac	270 ac
RWF- Fuel Reduction	$ 200 ac	0	642 ac	390 ac	614 ac
Fuel Reduction Mech (GP/MP)	$200/ac	0	1570 ac	1477 ac	1253 ac
Fuels Reduction Biomass Removal	$1000/ac	0	0	362 ac	0
Whipfell Hand work	$75ac	0	1,507 ac	1,550 ac	1,159 ac
Jackpot Burn	$100/ ac	0	985 ac	928 ac	995 ac
Pile Burn	$85/ ac	0	1662ac	1569 ac	1388 ac
Planting	$400/ac	0	92 ac	92 ac	92 ac

GP/MP – Grapple pile/Machine pile

Direct and Indirect Effects on Economics

ALTERNATIVE 1 – No Action

This alternative would not implement any of the fuel reduction activities proposed in the action alternatives, and as a result there would be no investment revenue received from logging, fuels reduction, and road work within the counties surrounding the two eagle project area.

ACTION ALTERNATIVES 2, 2 modified, 3

The following table summarizes the total estimated investment for each type of work and the total for each action alternative. In the table below:

> Harvest related work includes: costs associated with stump to truck (felling, yarding, loading), log haul, road maintenance, road reconstruction, and construction/obliteration of temporary road costs.
>
> Road Culvert includes: purchase of materials and installation of culvert including manpower and equipment.
>
> Fuels Reduction/Vegetation Management work includes: precommercial thinning, slashbusting, grapple piling, whipfelling, planting, fuel reduction work by hand, and handpiling. Does not include prescribed burning, jackpot burning, and pile burning (these will be accomplished by the Forest Service).

Table 4 – Investments by Alternative

Alt	Type of Work	Expected Investment for Each Type	Total Investment
2	-Harvest Related Work -Reconstruction, Maintenance, Decommissioning, Culverts Replacement (temp./ permanent) -Fuels Reduction/Vegetation Management -Reforestation -Soil Improvement, -Campground Improvement -Gate Instillation	$1,116,000 $394,425 $881,595 $36,800 $4,000 $15,000 $7,500	$2,455,320
2 Modified	-Harvest Related Work -Reconstruction, Maintenance, Decommissioning, Culverts Replacement (temp./ permanent) -Fuels Reduction/Vegetation Management -Reforestation -Soil Improvement, -Campground Improvement -Gate Instillation	$1,478,000 $394,425 $781,290 $36,800 $4,000 $15,000 $7,500	$2,717,015
3	-Harvest Related Work -Reconstruction, Maintenance, Decommissioning, Culverts Replacement (temp./ permanent) -Fuels Reduction/Vegetation Management -Reforestation -Soil Improvement, -Campground Improvement -Gate Instillation	$822,300 $359,005 $738,555 $36,800 $4,000 $15,000 $7,500	$1,983,160

Within Oregon, it is estimated that contract investments will generate between 15.7 – 23.8 jobs depending upon the work (labor intensive versus equipment intensive), as well as additional indirect jobs for each $1 million invested (Economic and Employment Impacts of Forest and Watershed Restoration in Oregon, University of Oregon Ecosystem Workforce Program – Working Paper Number 24, spring 2010). Direct effect employment includes those jobs created or maintained in businesses contracted to perform the work on the ground. Indirect effect employment includes those jobs associated with the demand for materials, supplies, equipment and other services needed to support the contract work.

Table 5 – Jobs by Alternative (based upon dollars invested)

Alternative	Direct Jobs	Indirect Jobs	Total Jobs
2	41	43	84
2 modified	45	46	91
3	29	33	62

Wages would be earned as a result of the jobs produced or maintained from the contract work. Total wages earned on a project vary by the proportion of hand work versus mechanical work on a project, with hand labor wages typically being lower than equipment intensive work. Table 6 displays estimated wages associated with the jobs produced.

Table 6 – Wages Earned by Alternative

Alternative	Direct Wages	Indirect Wages	Total Wages
2	$1,480,841	$1,524,487	$3,005,328
2 Modified	$1,610,115	$1,621,206	$3,231,321
3	$1,092,521	$1,171,016	$2,263,537

Total economic activity is the value of all of the goods and services produced as a result of the project work (Direct Output) as well as through the purchase of goods and services needed to support project implementation and the value of goods and services supported by household spending of income earned during project implementation (Indirect/Induced Output). Table 7 displays the economic outputs estimated for the investments for each of the action alternatives.

Table 7 – Total Economic Output for Investments

Alternative	Direct Outputs	Indirect Outputs	Total Outputs
2	$7,935,549	$4,448,023	$12,383,572
2 Modified	$8,613,621	$4,747,080	$13,360,701
3	$5,797,164	$3,397,565	$9,194,728

Summary

While Alternative 2 modified has the potential for the largest economic output for investments followed by Alternatives 2 and 3, respectively (tables 5-7); one must consider the likelihood that adequate funds will be available to fully implement the project, and that a biomass market becomes established in an economically feasible proximity. Diminishing federal budgets have the potential to affect the Forests' ability to make these investments, particularly related to non-commercial fuel reduction activities. Each alternative is projected to produce a deficit sale when considering harvest related work because logging costs exceed timber values. Logging systems, road work, slash treatment and utilization levels of the harvest are the primary factors contributing to this situation. None of the alternatives will provide adequate timber value to fully implement the work; therefore, service contracts will be necessary.

Funding for fuels related service work such as those proposed in the Two Eagle project is typically associated with hazardous fuel treatment funds. The past 10 year average annual hazardous fuel funding allocation to the Wallowa-Whitman is approximately $2.4 million. These funds support not only the federal personnel to do the planning, contract preparation and administration but also pay for the completion of the contract work. In the Two Eagle project, fuel reduction funding needs (table 4) for completion of the contract work alone ranges from approximately $700,000 to $900,000. Given current funding levels, it would take approximately 1-2 years to complete the non-commercial fuels reduction work in the Two Eagle area with no funding available for any other fuel reduction work on the remainder of the forest. Additional funding support will most likely be needed to complete all of the fuels reduction work for this project. Alternative 3 would have the least need, followed by Alternatives 2 and 2 modified, respectively.

Cumulative Effects on Economics

ALTERNATIVE 1 – No Action

The no action alternative would not contribute to the economies of the counties surrounding this project area; therefore, it has the potential to further impact the current struggles of the timber industry in northeast Oregon.

ACTION ALTERNATIVES 2, 2 modified, and 3

The cumulative effect of Alternatives 2, 2 modified and 3 are similar. They would all provide the counties surrounding the project area with receipts which otherwise would be dollars out oftaxpayer pockets. They would provide jobs as described under the direct and indirect effects above. The income generated by this project contributes to family wage earners and local industries, which in turn support other local businesses, hospitals, and services contributing to the overall economic vitality of the Counties. The greatest impact on this is from Alternatives 2 modified and 2 followed by 3. In addition, the alternatives and the effects will be similar when considering utilization of materials at manufacturing facilities. The products produced from this project under all of the action alternatives would not support the local businesses and mills alone; however, when added to the wood products being removed from other private, adjacent State, and corporate lands, as well as other national forest timber sales, it contributes to the overall viability and sustainability of local mills and businesses. The acres treated would provide seasonal work/benefits over a period of 8-10 years.